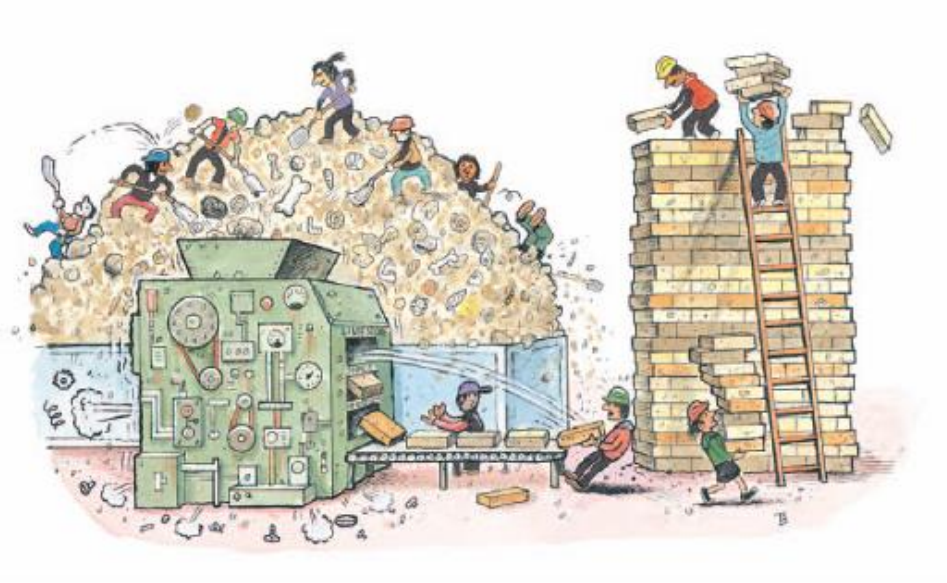
Activity 1
Sedimentary Rocks and the Geologic History of Your Community

Think About It Date

Page U4 Page #

- How does sediment (little pieces of rock) "turn into" sedimentary rock? (one big rock)



WHAT DO YOU THINK?

Activity 1

Investigate Part A

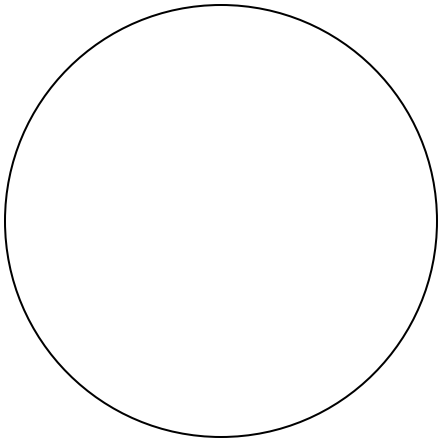
Date

Page U5

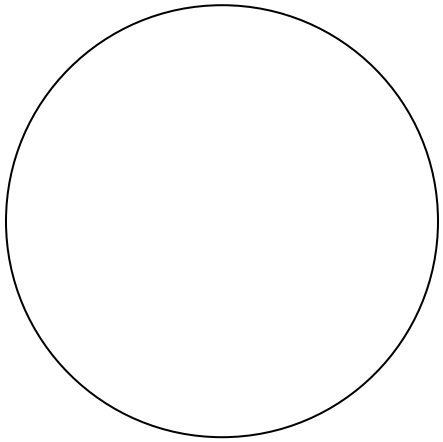
Page #

6a. Draw a labeled diagram of each sedimentary rock.

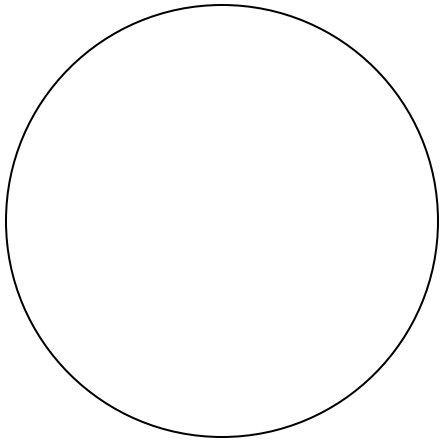
rock salt



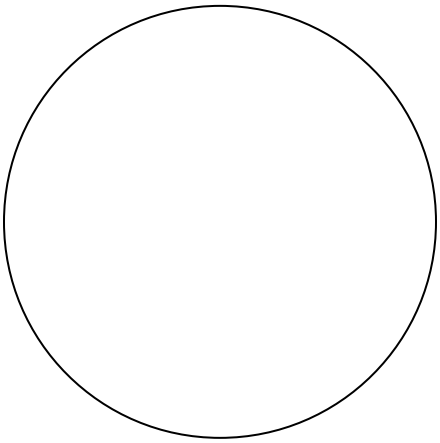
mudstone



sandstone



conglomerate



Activity 1

Investigate Part B Date

Page U6 Page #

1a. Make a data table.

Rock	Description	Sedimentary Type	Name
1			
2			
3			
4			
a			
c			
e			
h			
l			

Activity 1
Sedimentary Rocks

Digging Deeper Date

Pages U8-U12 Page #

http://www.brainpop.com/science/earthsystem/typesofrocks/

Learning Objective: **In writing, SWBAT describe the processes of weathering and erosion and list causes of each using academic language in order to understand how sedimentary rocks form and change.**

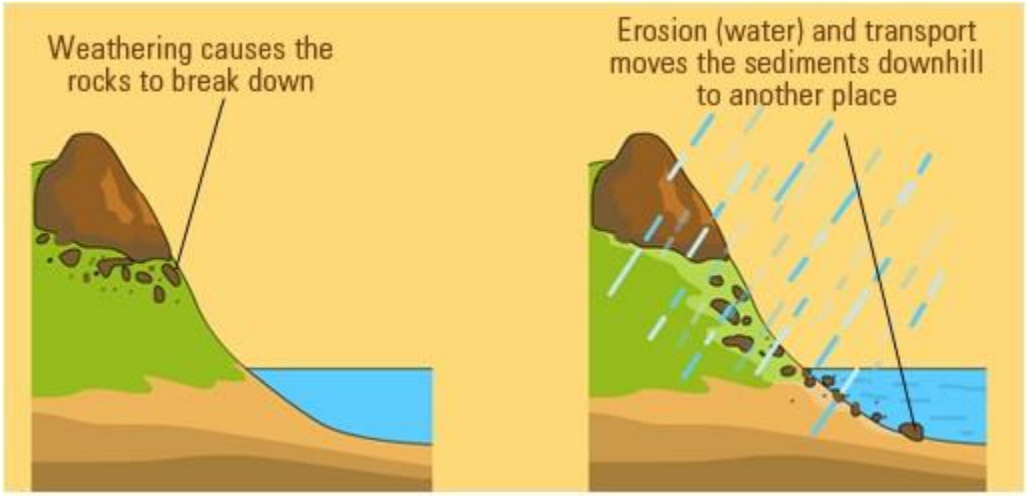
Weathering a process that breaks solid rock into sediments

Causes of weathering
- heat
- water
- wind
- ice
- plant growth
- chemicals (acid rain)

http://www.classzone.com/books/earth_science/terc/content/visualizations/es1305/es1305page01.cfm?chapter_no=visualization

http://www.brainpop.com/science/weather/weathering/

Erosion the movement of sediments to a new location



Causes of erosion
- water
- wind
- gravity
- glaciers

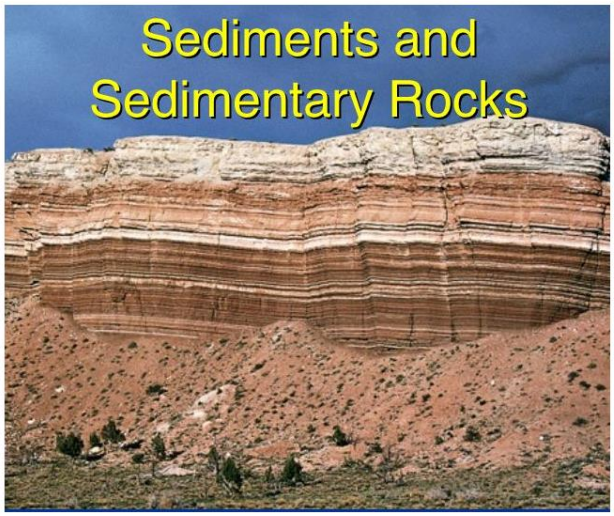
http://www.brainpop.com/science/earthsystem/erosion/

http://www.classzone.com/books/earth_science/terc/content/visualizations/es1303/es1303page01.cfm?chapter_no=visualization

http://www.classzone.com/books/earth_science/terc/content/visualizations/es0604/es0604page01.cfm?chapter_no=visualization

http://www.learner.org/interactives/rockcycle/change3.html

How sediments form	the processes of weathering and erosion break solid rock down into sediments and deposit them in new locations
	a rock formed when sediments are deposited into layers



Classification	sedimentary rocks are classified by: •their composition •how they form
3 types of sedimentary rock	1. 2. 3.

Learning Objectives: **In writing, SWBAT describe how the three types of sedimentary rocks form and give examples of each type using academic language in order to understand their role in the rock cycle.**

[redacted] a sedimentary rock made up of rock pieces that can become compacted and cemented into solid rock

Examples of clastic sedimentary rocks

-
-
-
-
-
-

[redacted] a sedimentary rock formed when dissolved minerals come out of water

Examples of chemical sedimentary rocks

-
-
-
-

[redacted] the most common chemical sedimentary rock

Large areas of the central United States have limestone bedrock because oceans covered much of the country for millions of years

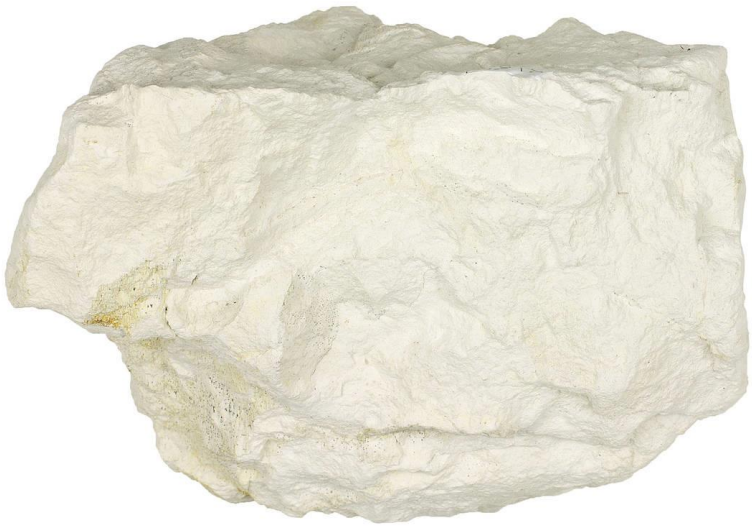
[redacted]

a sedimentary rock made mainly of the remains of organisms that are compacted together

Example of organic sedimentary rock

•

•chalk



[redacted]

plants in swamps with rich plant life die and are buried by the remains of later plants of later plants and sediments

Over time, the plant material is compressed so much by the weight of sediment from above that it is turned into solid rock

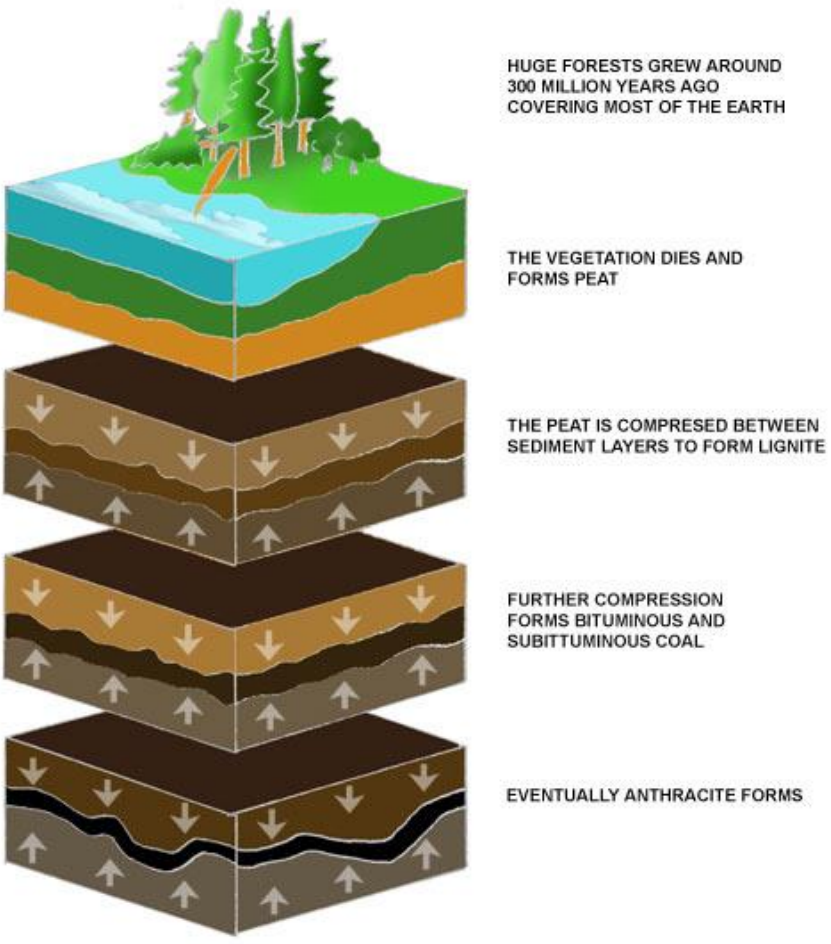
[redacted]

the first material to form, is not yet buried very deeply

[redacted] brown coal

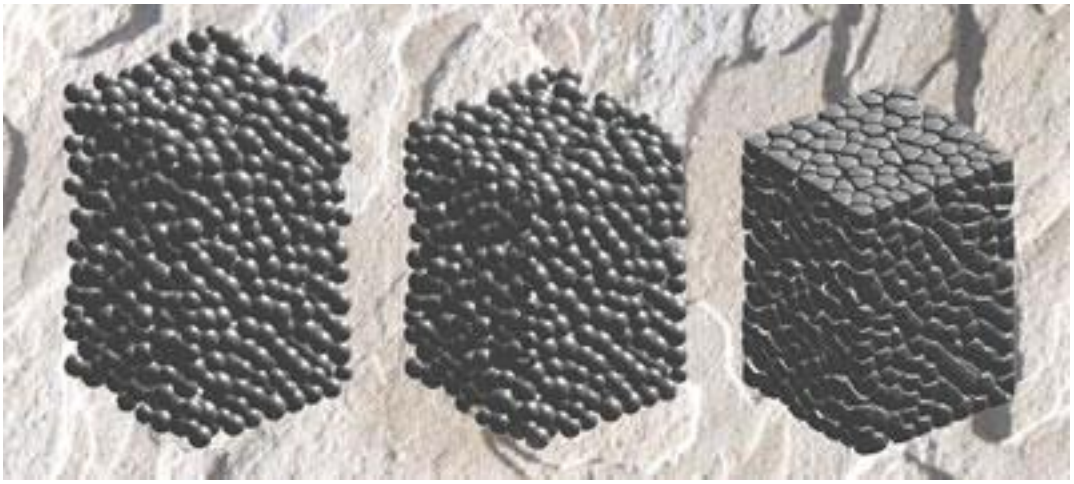
[redacted] soft coal

[redacted] hard coal



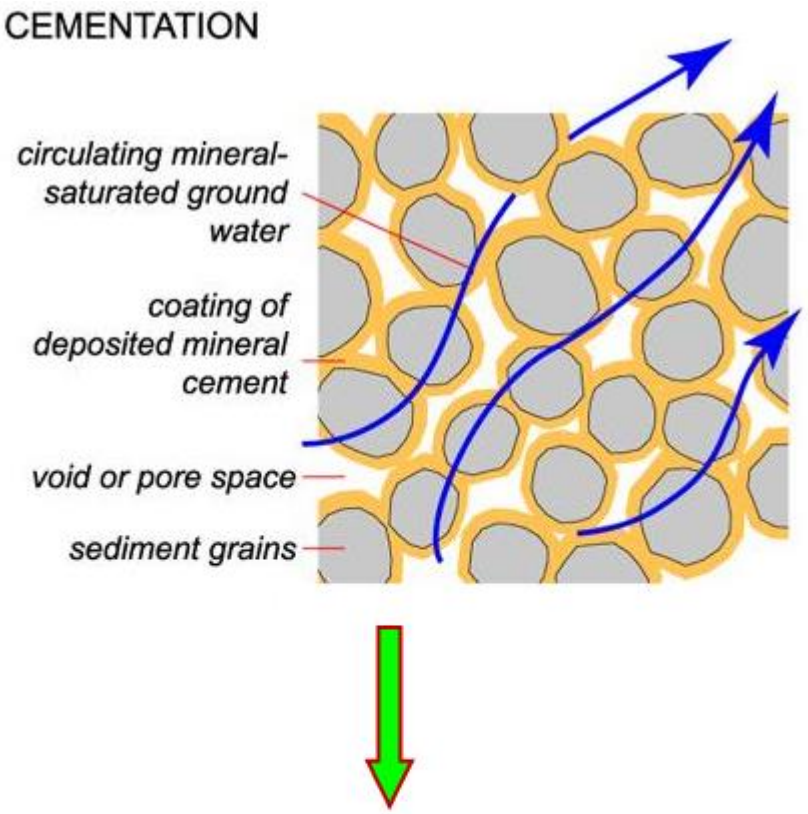
http://www.hk-phy.org/energy/power/source_phy/flash/formation_e.html

Coal	forms in tropical to subtropical climates
Ancient coal	found in Antarctica suggests the climate in Antarctica was once warm, or tropical
Learning Objective:	**In writing, SWBAT compare and contrast compaction and cementation using academic language in order to understand how sedimentary rocks form.**
	the process of sediments being compressed by the weight of the layers above them



http://www.absorblearning.com/media/item.action?quick=136

	water carries dissolved minerals through the spaces between sediments and cements them together
Sediments to rock	the processes of compaction and cementation change sediments to solid sedimentary rock



http://www.classzone.com/books/earth_science/terc/content/visualizations/es0605/es0605page01.cfm?chapter_no=visualization

http://www.learner.org/interactives/rockcycle/change3.html

http://www.geolsoc.org.uk/ks3/gsl/education/resources/rockcycle/page3559.html

Activity 1

Check Your Understanding Date

Page U12 Page #

1. Explain how the three main types of sedimentary rock form.

2. What does the discovery of limestone at the top of Mt. Everest suggest about how the geography of that area has changed?

The discovery of limestone at the top of Mt. Everest suggests that the area was once _____ .

3. What does the discovery of ancient coal in Antarctica suggest about the past climate of that area?

The discovery of ancient coal in Antarctica suggests the climate was once _____ .

4. Create a Venn diagram to compare and contrast the processes of weathering and erosion.